



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

2859  
#QIDS  
3-21-02  
A506S

In Re: SARTSCHEV, Ronald A., et al.

Serial No: 10/015865

Group:

Filed: 12/12/01

Examiner:

For: COMPACT ATE WITH  
TIMESTAMP SYSTEM

February 5, 2002

**CERTIFICATE OF MAILING, EXPRESS MAIL, OR TRANSMISSION**

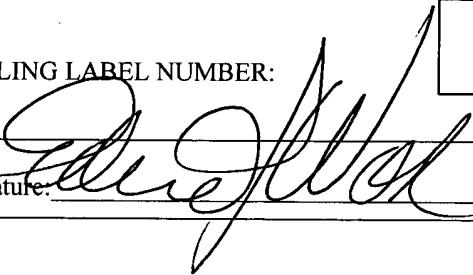
I, Edmund J. Walsh, Reg. No. 32,950, certify that—

this correspondence was placed in an envelope addressed to the Assistant Commissioner for Patents, Washington, DC 20231 and I have a reasonable basis to believe that it will be deposited with the US Postal Service as first class mail, postage prepaid, to the U.S. Patent and Trademark Office on or before February 5, 2002,

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Washington, DC 20231

**INFORMATION DISCLOSURE STATEMENT**

Sir/Madam:

In accordance with the duty of candor, the Applicant wishes to make of record the following documents listed on the attached form.

A) This statement is being filed—

1. Within three months of the filing date of a national application other than a continued prosecution application under § 1.53(d);
2. Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application;
3. Before the mailing of a first Office action on the merits; or
4. Before the mailing of a first Office action after the filing of a request for continued examination under § 1.114,

and therefore no additional fees are due,

OR

B) This statement is being filed—

1. Before the mailing date of any of a final action under § 1.113, a notice of allowance under § 1.311, or an action that otherwise closes prosecution in the application; or
2. On or before payment of the issue fee,

and it is accompanied by one of:

A fee set forth in § 1.17(p). The Commissioner is hereby authorized to charge **\$180**, the payment of fees under § 1.17(p), to Deposit Account Number **20-0515**; or

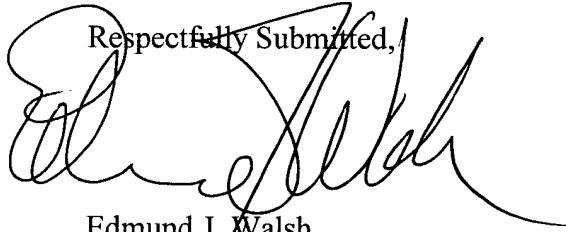
A statement specified in 37 C.F.R. 1.97 (e):

- Each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement; or
- No item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information

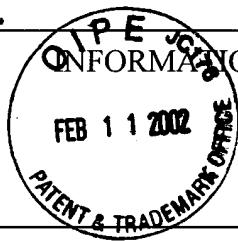
disclosure statement was known to any individual designated in § 1.56(c) more than three months prior to the filing of the information disclosure statement.

This information disclosure statement is not to be construed as a representation that a search has been made, nor is it to be construed as an admission that the information cited in the statement is, or is considered to be, material to patentability as defined in § 1.56(b).

Respectfully Submitted,

  
Edmund J. Walsh  
Reg. 32,930  
Attorney for Applicant

Atty. Docket : 1490-US  
Telephone : 617-422-2853  
Fax : 617-422-2290



Sheet 1 of 5

Atty. Docket No. 1493	Serial No. 10/015865
Applicant: SARTSCHÉV, Ronald A., et al.	
Filing Date: 12/12/01	Group:

## U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if appropriate
	AA	6,246,737	Jun 12, 2001	Kuglin	375	371	Oct 26, 1999
	AB	5,694,377	Dec 2, 1997	Kushnick	368	120	Apr 16, 1996
	AC	6,073,259	Jun 6, 2000	Sartschev et al.	714	724	Aug 5, 1997
	AD						10 22 - 1 B
	AE						20 - 1 B
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## FOREIGN PATENT DOCUMENTS

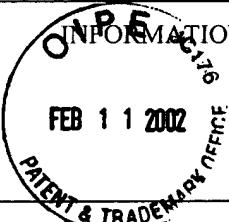
FOREIGN PATENT DOCUMENTS							Translation	
		Document Number	Date	Country	Class	Subclass	Yes	No
	AG							
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**OTHER ART (Including Author, Title, Date, Pertinent Pages, etc.)**

	AJ	Rainer Geiges, et al., "A High Resolution TDC Subsystem," IEEE Transactions on Nuclear Science, Vol. 41, No. 1, February 1, 1994
	AK	M. Sugawara, et al. "A 2.5V 100MS/s 8bit ADC Using Pre-Linearization Input Buffer and Level Up DAC/Subtractor," 1998 Symposium on VLSI Circuits Digest of Technical Papers, August 1998
	AL	J. Christiansen, "An Integrated CMOS 0.15 ns Digital Timing Generator for TDS's and Clock Distribution Systems," March 1995
	AM	Piotr Dudek, et al., "A High-Resolution CMOS Time-to-Digital Converter Utilizing a Vernier Delay Line," IEEE Transactions on Solid-State Circuits, Vol. 35, No. 2, February 2000
	AN	Yasuo Arai, et al., "A CMOS Four-Channel X 1K Time Memory LSI with 1-ns/b Resolution," IEEE Journal of Solid-State Circuits, Vol. 27, No. 3, March 1992
	AO	Andrew E. Stevens, et al., "A Time-to-Voltage Converter and Analog Memory for Colliding Beam Detectors," IEEE Journal of Solid-State Circuits, Vol. 24, No. 6, December 1989

Examiner \_\_\_\_\_ Date Considered \_\_\_\_\_

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

 <b>PATENT &amp; TRADEMARK OFFICE</b>		Atty. Docket No. 1490	Serial No. 10/015865
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AJ	C. Thomas Gray, et al., "A Sampling Technique and Its CMOS Implementation with 1 Gb/s Bandwidth and 25 ps Resolution," IEEE Journal of Solid-State Circuits, Vol. 29, No. 3, March 1994
AK	Keunoh Park, et al., "20ps Resolution Time-to-Digital Converter for Digital Storage Oscilloscopes," September 1999
AL	Joonbae Park, et al., "An Auto-Ranging 50-210Mb/s Clock Recovery Circuit with a Time-to-Digital Converter," 1999 IEEE International Solid-State Circuits Conference, February 17, 1999
AM	Elvi Raisanen-Ruotsalainen, et al., "An Integrated Time-to-Digital Converter with 30-ps Single-Shot Precision," IEEE Journal of Solid-State Circuits, Vol. 35, No. 10, October 2000
AN	R. Rankinen, et al., "Time-to-Digital Conversion with 10 ps Single Shot Resolution," 1991
AO	Elvi Raisanen-Ruotsalainen, et al., "A BiCMOS Time-to-Digital Converter with 30 ps Resolution," 1999

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OPI INFORMATION DISCLOSURE STATEMENT FEB 11 2002 PATENT & TRADEMARK OFFICE			Atty. Docket No. 1490		Serial No. 10/015865	
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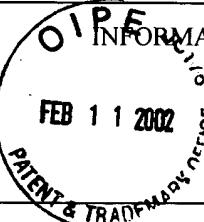
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AJ	Elvi Raisanen-Ruotsalainen, et al., "A Low-Power CMOS Time-to-Digital Converter," IEEE Journal of Solid-State Circuits, Vol. 30, No. 9, September 1995
AK	Hideki Shirasu, et al., "A VME 32 Channel Pipeline TDC Module with TMC LSIs," IEEE Transactions on Nuclear Science, Vol. 43, No. 3, June 1996
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AM	Dinis M. Santos, et al., "A CMOS Delay Locked Loop and Sub-Nanosecond Time-to-Digital Converter Chip," 1996
AN	Antti Mantyniemi, et al., "A High Resolution Digital CMOS Time-to-Digital Converter Based On Nested Delay Locked Loops," 1999
AO	Timo E. Rahkonen, et al., "The Use of Stabilized CMOS Delay Lines for the Digitization of Short Time Intervals," IEEE Journal of Solid-State Circuits, Vol. 28, No. 8, August 1993

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AJ	Timo Rahknone, et al., "Time Interval Measurements Using Integrated Tapped CMOS Delay Lines," 1990
AK	P. Bailly, et al., "A 16-Channel Digital TDC Chip."
AL	Vadim Gutnik, et al., "On-Chip Picosecond Time Measurement," 2000 Symposium on VLSI Circuits Digest of Technical Papers, April 2000
AM	Jozef Kalisz, et al., "Single-Chip Interpolating Time Counter With 200-ps Resolution and 43-s Range," IEEE Transactions on Instrumentation and Measurement, Vol. 46, No. 4, August 1997
AN	C. Ljuslin, et al., "An Integrated 16-Channel CMOS Time to Digital Converter," IEEE Transactions on Nuclear Science, Vol. 41, No. 4, August 1994
AO	Beomsup Kim, et al., "A 30-MHz Hybrid Analog/Digital Clock Recovery Circuit in 2-um CMOS," IEEE Journal of Solid-State Circuits, Vol. 25, No. 6, December 1990

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<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, etc.)</b>							
	AJ	"Misfire Analysis with Time Interval Analyzer," Yokogawa Test and Measurement, <a href="http://www.yokogawa.com/tm/appli/48/48misfire.html">wysiwyg://210/http://www.yokogawa.com/tm/appli/48/48misfire.html</a>					
	AK	"Using FastFrame Segmented Memory," Tektronix MBD: Applications, <a href="http://www.tektronix...easurement/App_Notes/dpo/fastframe/eng/">sysiyg://BODY.181/http://www.tektronix...easurement/App_Notes/dpo/fastframe/eng/</a>					
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